



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,087	08/26/2003	Thomas E. Charlton	ANCO / 82US	2773
26875	7590	03/22/2005	EXAMINER	
WOOD, HERRON & EVANS, LLP 2700 CAREW TOWER 441 VINE STREET CINCINNATI, OH 45202			VY, HUNG T	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/648,087

Applicant(s)

CHARLTON, THOMAS E.

Examiner

Hung T. Vy

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on the preliminary on 8/26/2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/04/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### **Acknowledges**

1. Receipt is acknowledged of the following items from the Applicant.  
Information Disclosure Statement (IDS) filed on 12/04/2003. The references cited on the PTOL 1449 form have been considered.

### **Specification**

2. The specification has been checked to the extent necessary to determine the presence of possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### **Claim Rejections - 35 USC § 102**

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 10 and 29 are rejected under 35 U. S. C. § 102 (b) as being anticipated by Ben-Dov, U.S. patent No. 4,885,839.

Claim 1, 10 and 29, Ben-Dov discloses a method and an antenna system comprising: a support structure (See fig. 5); and a multiband/multichannel (See column 1, line 19-38) wireless feeder configured for coupling an antenna 524 located proximate the top of a support structure with electronics 510 located proximate the base 514 of the support structure to overcome losses typically associated with coaxial cables (see fig. 5 and see column 5, line 45-65).

Claim 32, Ben-Dov discloses a circular waveguide (see abstract).

Art Unit: 2821

5. Claims 6, 8 and 18 are rejected under 35 U. S. C. § 102 (b) as being anticipated by Tawil, U.S. patent No. 5,235,297.

Claims 6, 18 Tawil discloses a multiplexing waveguide network coupled at each end of the waveguide (see column 7, line 3-8) and configured to combine frequency and applications (see column 5, line 26-35).

Claim 8, Tawil discloses a circular waveguide (See fig. 1).

### **Claim Rejections - 35 U.S.C. § 103**

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 4-5, 11-16, 22-26, 28, 30 and 33-38 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Ben-Dov, U.S. patent No. 4,885,839 in view of Tawil, U.S. Patent No. 5,235,297.

Claims 2, 5, 11-13, and 22-24, 30, and 33-35, Ben-dov discloses all limitations of claim except for a multiplexing waveguide. However, Tawil discloses a multiplexing waveguide network coupled at each end of the waveguide (see column 7, line 3-8) and configured to combine frequency and applications (see column 5, line 26-35). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Ben-dov to have a multiplexing waveguide as taught by Tawil. The motivation for doing so would have been to provide multiplexing waveguide in order to have constant impedance at each coupling

Art Unit: 2821

point to the waveguide since each channel is directionally coupled to the waveguide and channel can be added or subtracted from such a multiplexer (see column 3, line 15-33). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify to have the different kind of applicant as 3G or PCS.

Claims 4, and 28, Ben-dov discloses a circular waveguide (see abstract).

Claims 14-15, 25-26 and 36-37, Tawil disclose a single polarization (column 1, line 48-63).

Claim 16, and 38 Ben-dov discloses the waveguide is flexible for being curved (see fig. 5).

8. Claims 3, 27 and 31 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Ben-Dov, U.S. patent No. 4,885,839 and Tawil, U.S. Patent No. 5,235,297 in view of Juds et al., U.S. Patent No. 4,763,132.

Claims 3, 27 and 31, Ben-dov and Tawil disclose all limitations of claims except for an elliptical waveguide. However, Juds et al. disclose an elliptical waveguide (see fig. 7). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Ben-dov and Tawil to have an elliptical waveguide as taught by Juds et al. The motivation for doing so would have been to provide an elliptical waveguide in order to have different mode of frequency of waveguide.

9. Claims 7, 9, 17 and 19-21 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Tawil, U.S. Patent No. 5,235,297 in view of Juds et al., U.S. Patent No. 4,763,132.

Claims 7, 9 and 17, Tawil discloses all limitations of claims except for an elliptical waveguide. However, Juds et al. disclose an elliptical waveguide (see fig. 7). It would have been

Art Unit: 2821

obvious at the time the invention was made to a person having ordinary skill in the art to modify Tawil to have an elliptical waveguide as taught by Juds et al. The motivation for doing so would have been to provide an elliptical waveguide in order to have different mode of frequency of waveguide. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify to have the different kind of applicant as 3G or PCS.

Claims 19-21 Tawil disclose a single polarization (column 1, line 48-63).

### **Conclusion**

10. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Vy whose telephone number is (571) 272-1954. The examiner can normally be reached on Monday-Friday 8:30 am - 5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 308-7722 for After Final communications.


Information regarding the status of an application may be obtained from the patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either private Pair or Public Pair. Status information for unpublished applications is available through Private Pair only. For more information about the PAIR

Art Unit: 2821

system, see <http://pair-direct.uspto.gov>. Should you have question on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hung Vy

March 9, 2005.



WILSON LEE  
PRIMARY EXAMINER